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The 1979 Iowa Corn Yield Test Report, District 4

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The 1979 Iowa Corn Yield Test Report, District 4

Abstract

Results of the Iowa Corn Yield Test are published to sixtieth consecutive year for the test.

Disciplines

Agriculture | Agronomy and Crop Sciences



- Crops
- Soils
- Climate

THE 1979 IOWA CORN YIELD TEST REPORT

District 4

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixtieth consecutive year for the test.

The presentation of data for the varieties tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Iowa State University approves the reproduction of any table in this report **only** if no portion is deleted and if the order of the data is not rearranged. Entries in tables 1 and 2 are designated by brand name and variety.

1979 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of nine entries per district. All entries had to be available in a quantity of at least 10 bushels of seed.

One hundred thirty two entries were compared in this test. Twenty of them were determined to be widely grown and were entered by Iowa State University. Entries were considered widely grown if they were planted on 0.75 per cent or more of the corn acreage in the district according to a 1978 survey of Iowa corn growers. Iowa State University entered a maximum of five widely grown varieties of any given brand. These entries were given priority over the remaining 112 entries made by seed producers.

Each entry was replicated four times in 4-row plots at a planting rate of 21,500 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5-percent moisture for shelled corn.

Prepared by Kenneth E. Ziegler, instructor in agronomy, and C. D. Hutchcroft, professor of agronomy and secretary of the Iowa Crop Improvement Association.

How Information Is Presented

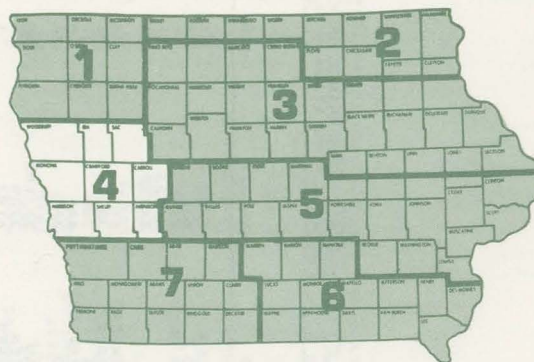
The data presented are averages of two locations in 1977, one location in 1978, and two locations in 1979. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries tested in 1979 and for those tested in 1977 and 1978 that were in the 1979 test.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values shown in tables 1 and 2 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1 and 2 are indicators of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.



Cooperative Extension Service,
Agriculture and Home Economics Experiment Station,
Iowa Crop Improvement Association, and the
United States Department of Agriculture cooperating

Cooperative Extension Service

Iowa State University

Ames, Iowa 50011

Pm-660-4-79 | December 1979

TABLE 1. AVERAGE PERFORMANCE OF VARIETIES TESTED IN DISTRICT 4.
MODERATE POPULATION - 21,500 PLANTING RATE. LSD FOR 1979 YIELD IN BUSHELS IS 16.

BRAND	VARIETY	CROSS	YIELD BU./A			MOISTURE PCT.			RCCT LODGING PCT.			STALK LODGING PCT.			DROPPED EARS PCT.			STAND PCT.		
			1977	1978	1979	1979	1978	1977	1979	1978	1977	1979	1978	1977	1979	1978	1977	1979	1978	1977
*PIONEER	3780	SX	78	130	135	17.3	16.8	16.5	5	0	0	6	2	11	1	0	4	83	88	84
EMBRO	X36	SX			141	17.4			9			9			0			83		
SUPER CROST	2350	SX	74	132	130	17.4	17.1	16.3	13	1	2	9	2	11	1	2	1	85	74	77
FUNK	G4323	MS			136	17.9			15			3			2			82		
SAR	SX200	SX	64	131	146	17.9	17.3	17.2	11	1	9	7	4	24	1	0	4	81	87	87
KALTENBERG	KX61	SX			146	18.0			21			16			0			80		
JACOBSEN	JS34A	MS	79	129	131	18.2	17.0	18.1	10	2	0	5	2	8	0	2	1	84	92	85
*CROWS	380	SX			142	18.3			15			5			0			84		
FS SERVICES	444	SX	75	138	142	18.4	17.3	16.6	11	1	0	3	2	7	1	1	6	82	85	73
EMBRO	X45	MS			135	18.4			10			3			1			80		
TROJAN	TXS103	SX			115	18.4			39			17			0			83		
*PIONEER	3709	MS			120	18.5			7			3			0			83		
AGRISEED	6132	SX		129	129	18.5	18.0		8	1		1	3		1	1		87	79	
O'S GOLD	SX1040	SX		145	123	18.6	17.1		22	1		16	8		0	1		82	91	
COOP	2260	SX		112	136	18.6	17.4		14	0		3	1		1	4		85	86	
BLANEY	B606	SX	76	123	130	18.6	17.2	16.8	15	0	0	5	0	4	1	1	1	82	69	75
*LYNKs	LX4220A	SX			134	18.7			17			8			1			79		
*DEKALB	XL25	SX			120	18.7			16			6			1			77		
KALTENBERG	KX68	SX	72	124	131	18.7	17.7	16.8	15	1	0	5	1	5	1	3	3	83	85	84
COOP	2200	SX	64	125	117	18.7	17.9	16.8	15	0	0	14	2	7	0	0	2	79	81	83
TALL CORN	SX110	SX			131	18.7			16			4			0			78		
GOLDEN HARVEST	H2445	MS			135	18.7			16			5			1			86		
*LYNKs	LX4220	SX	77	126	138	18.8	18.1	17.1	18	0	0	7	0	3	0	3	2	87	78	74
TROJAN	T1058	SX		123	125	18.9	18.4		5	1		6	2		0	1		73	82	
GOLD TAG	2060	MS			130	19.0			14			5			1			77		
PRIDE	5578	SX		134	128	19.0	19.1		44	0		17	7		0	1		85	79	
WINTERSET	SX62	SX			137	19.0			14			9			0			81		
HOEGEMEYER	SX2602	SX			125	19.1			16			8			0			83		
NC+	3990	SX			133	19.2			2			5			1			81		
EMBRO	X40	MS			137	19.3			10			7			1			81		
MIGRO	HP27	SX			134	19.4			24			7			0			84		
O'S GOLD	SX2199	SX			113	19.5			13			11			0			85		
BLANEY	B606EWX	MS			128	19.5			13			6			1			77		
AMES BEST	SX37A	MS		132	126	19.6	17.6		23	0		12	5		0	2		84	95	
ASGROW	RX549	SX			128	19.6			2			7			0			80		
*PIONEER	3541	SX	73	133	148	19.7	18.4	17.7	4	0	2	3	1	6	1	4	3	81	86	83
CURRY	SC1422	SX			150	20.0			20			10			0			87		
GOLD TAG	208C	MS			125	20.0			8			5			1			78		
*ACCO	UC3301A	SX		144	117	20.1	18.4		28	1		16	2		0	1		84	89	
SAR	SX210A	SX		131	138	20.3	17.1		17	0		4	1		1	1		82	90	
NC+	4222	3X			126	20.5			5			3			0			85		
PRIDE	6678	SX	86	153	129	20.6	20.5	19.3	26	1	2	7	8	8	0	0	0	81	88	77
NORTHROP KING	PX69A	SX			121	20.7			21			8			0			81		
FUNK	G4430	SX	50	133	138	20.8	13.8	17.9	13	0	0	10	3	11	0	2	4	80	83	83
NORTHROP KING	PX603	3X		146	132	21.0	20.5		40	0		6	10		0	2		82	87	
*ACCO	UC4201	SX			127	21.3			14			14			1			77		
CARGILL	921	SX			141	21.3			12			6			2			85		
FUNK	G4450	MS			144	21.6			11			4			0			78		
*DEKALB	XL64	SX	74	148	123	21.7	21.0	19.5	32	0	1	13	4	17	0	0	2	79	89	80
*DEKALB	XL54	SX	85	138	124	21.8	21.0	19.7	35	0	5	14	6	15	0	2	0	80	82	84
IOWA STATE	M116	SX		159	139	22.0	21.2		12	4		16	9		0	1		77	76	
ASGROW	RX901	SX			132	22.1			22	2		13			0			81		
HORIZON	841	SX		125	122	22.1	22.1		3			3			0			75		
JACOBSEN	J318	3X		143	117	22.2	19.3		16	0		4	5		1	3		82	93	
FONTANELLE	590	SX		134	141	22.3	22.4		7	1		3	7		1	4		84	86	
*PIONEER	3388	MS	100	140	136	22.3	20.7	20.0	21	2	3	7	2	8	0	0	1	75	93	79
*DEKALB	XL64A	MS			123	22.4			43			25			1			84		
ASGROW	2X777	SX			133	22.6			52			10			2			83		
SAR	SP71	3X			132	22.8			22			4			1			82		
NC+	5950	SX			140	22.9			5			5			0			83		
CARGILL	934	SX			132	22.9			11			6			0			82		
AMES BEST	SX18	SX		154	128	23.0	21.2		16	0		16	16		1	0		78	81	
PFISTER	68	SX	87	155	131	23.2	21.4	21.4	27	0		16			1	0		78	81	
PRAIRIE VALLEY	59	SX			126	23.3			17			4			0			81		
HORIZON	555	3X			134	23.5			15			5			0			80		
MCCURDY	MSX77	SX			136	23.5			16			5			1			79		
NORTHROP KING	PX74	SX	68	141	1363</															

1979 Field Data

The District 4 test was conducted on farms operated by Charles Pike near Whiting in Monona County and by Gerald Thiedeman near Westside in Crawford County. The field data are presented in table A.

Subsoil moisture for the district was favorable at planting time. Rainfall was well below normal in May and July and below normal in June, August, and September. Temperatures were below normal in May, July, and August, normal in June, and above normal in September. Yields were above normal in the district.

Table A. Field Data

Thiedeman Farm Marshall silty clay loam				Pike Farm Salix silty clay loam			
Fertilizer applied, lbs.	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O	
Plowdown	10	40	20	—	—	—	
Preplant	120	—	—	164	74	32	
TOTAL	130	40	20	164	74	32	
1978 Crop	Soybeans			Soybeans			
Row Width	38 inches			30 inches			
Planting date	May 14			May 16			
Harvest date	Nov. 15			Oct. 17			

District 4

Designations Identifying Brands in the Yield Test

*ACCO	ACCO Seed Div. of Anderson, Clayton & Co., Belmond, Iowa 50421
Agriseed	Agriseed Inc., Ames, Ia. 50010
Ames Best	Ames Best Hybrids, Ames, Ia. 50010
Asgrow	Asgrow Seed Company, Des Moines, Ia. 50053
Blaney	Blaney Farms, Inc., Madison, Wis. 53711
Cargill	Cargill, Inc., Minneapolis, Minn. 55440
Coop	Farmland Industries, Inc., Kansas City, Mo. 64116
Corn King	Malcolm H. Grieve, Pierson, Ia. 51048
*Crow's	Crow's Hybrid Corn Co., Milford, Ill. 60953
Curry	Curry Seed Co., Elk Point, S.D. 57025
*DeKalb	DeKalb Ag. Research, Inc., DeKalb, Ill. 60115
Embro	Ramy Seed Company, Mankato, Minn. 56001
Federal	Federal Hybrids, Marion, Ia. 52302
Fontanelle	Fontanelle Hybrids, Nickerson, Neb. 68044
F.S.	F.S. Services, Inc., Bloomington, Ill. 61701
Funk	Funk Seeds International, Inc., Bloomington, Ill. 61701
*Golden Harvest	The J. C. Robinson Seed Company, Waterloo, Ia. 68069
Gold Tag	Ferry-Morse Seed Co., Geneseo, Ill. 61254
Hoegemeyer	Hoegemeyer Hybrids, Inc., Hooper, Neb. 68031
Horizon	Miller Seed Co., Lincoln, Neb. 68501
Iowa State	Iowa State Hybrid Corn Co., Elkhart, Ia. 50073
Jacobsen	Jacobsen Hybrid Corn Co., Inc., Lake View, Ia. 51450
Kaltenberg	Kaltenberg Seed Farms, Waunakee, Wis. 53597
*Lynks	Lynks Hybrids, Marshalltown, Ia. 50158
McCurdy	McCurdy Seed Co., Fremont, Ia. 52561
Migro	North American Plant Breeders, Ames, Ia. 50010
NC+	NC+ Hybrids, Lincoln, Neb. 68504
Northrup King	Northrup King Co., Minneapolis, Minn. 55440
*O's Gold	O's Gold Seed Co., Parkersburg, Ia. 50665
*PAG	PAG Seeds, Minneapolis, Minn. 55440
Pfister	Pfister Hybrid Corn Co., El Paso, Ill. 61738
*Pioneer	Pioneer Hi-Bred International, Inc., Des Moines, Ia. 50308
Prairie Valley	Prairie Valley, Inc., Phillips, Neb. 68865
Pride	Pride Company, Inc., Glen Haven, Wis. 53810
SAR	SAR Hybrids, Inc., Charles City, Ia. 50616
Super Crost	Edward J. Funk & Sons, Inc., Kentland, Ind. 47951
Tall Corn	Tall Corn Hybrids, Inc., Grinnell, Ia. 50112
Trojan	Pfizer Genetics, Inc., Olivia, Minn. 56277
Vike	Vike Hybrids, Ames, Iowa 50010
Wilson	Wilson Hybrids, Inc., Harlan, Ia. 51537
Winterset	Winterset Hybrid Company, Winterset, Ia. 50273

TABLE 2. AVERAGES OF 1978-79 AND 1977-79 OF VARIETIES TESTED IN DISTRICT 4. LSD FOR YIELDS ARE 8 BUSHELS FOR 77-79 AND 11 BUSHELS FOR 78-79.

BRAND	VARIETY	CROSS	YIELD BU./A. 77-79	YIELD BU./A. 78-79	MOISTURE PCT. 78-79	MOISTURE PCT. 77-79
*PIONEER	3780	SX	114	132	17.0	16.9
SUPER CROST	2350	SX	112	131	17.2	16.9
SAR	SX200	SX	113	138	17.6	17.5
JACOBSEN	J534A	MSX	113	130	17.6	17.8
O'S GOLD	SX1040	SX	113	134	17.8	
FS SERVICES	444	SX	118	140	17.8	17.4
BLANEY	B606	SX	109	126	17.9	17.5
COOP	2260	SX	109	124	18.0	
KALTENBERG	KX68	SX	109	127	18.2	17.7
COOP	2200	SX	102	121	18.3	17.3
AGRISEED	6182	SX		129	18.3	
*LYNKS	LX4220	SX	113	132	18.4	18.0
AMES BEST	SX37A	MSX		129	18.6	
TROJAN	T1065	SX		124	18.6	
SAR	SX210A	SX		134	18.7	
*PIONEER	3541	SX	118	140	19.0	18.6
PRIDE	5578	SX		130	19.0	
*ACCO	UC3301A	SX		135	19.6	19.2
FUNK	G8430	SX	110	132	19.6	
PRIDE	6678	SX	122	141	20.5	20.1
JACOBSEN	J318	SX		130	20.7	
NORTHUP KING	PX603	SX		123	20.8	
*DEKALB	XL64	SX	115	135	21.3	23.7
*DEKALB	XL5A	SX	115	131	21.4	20.8
*PIONEER	3388	MSX	125	138	21.5	21.0
IOWA STATE	M116	SX		149	21.6	
HORIZON	841	SX		123	22.1	
AMES BEST	SX18	SX		141	22.1	
PFISTER	68	SX	124	143	22.2	21.9
FONTANELLE	590	SX		127	22.3	
COOP	2300	SX	113	132	22.3	21.7
WILSON	1040	SX	112	129	22.4	21.8
AGRISEED	7642	SX	114	136	22.5	22.1
PFISTER	65	SX	125	143	22.5	21.9
CURRY	SC150	SX	120	144	22.5	22.0
NORTHUP KING	PX74	SX	115	138	22.5	22.0
HORIZON	861	SX	127	152	22.7	21.7
CARGILL	949	SX	119	142	22.7	22.3
FEDERAL	FX39	SX	117	139	22.7	21.9
*LYNKS	LX4330	SX	116	134	22.7	22.2
PAG	SX333	SX		146	22.7	
PRAIRIE VALLEY	765	SX		141	22.8	
MIGRO	HP44	SX		140	22.8	
PFISTER	75	SX	117	141	22.8	22.4
IOWA STATE	110	SX		141	22.8	
MCCURDY	MSX65	SX	124	150	22.8	22.0
AMES BEST	SX19	SX	125	148	22.8	22.0
FONTANELLE	611	SX	116	138	22.8	22.1
FS SERVICES	680	SX	123	141	22.9	22.1
SUPER CROST	5440	SX	117	140	23.0	22.3
JACOBSEN	J54R	SX	121	140	23.0	22.2
TROJAN	TX5115A	SX	114	132	23.0	22.5
WILSON	RX00	SX	111	130	23.1	22.5
ASGROW	RX90	SX	118	137	23.1	22.5
SUPER CROST	S330	MSX		138	23.1	
HOEGEMEYER	SX2644	SX		145	23.1	
PRIDE	7715	SX	119	141	23.1	22.2
*O'S GOLD	SX500A	SX	120	140	23.1	22.3
HORIZON	870	SX	113	129	23.1	22.2
FONTANELLE	580	SX	116	136	23.2	22.3
MCCURDY	MSX84	SX	112	132	23.4	22.7
KALTENBERG	KX76	SX	111	131	23.6	22.7
ACCO	UC7601	SX		137	23.7	
CURRY	SC1505	SX		142	23.7	
SAR	SX250	SX	115	130	23.8	23.4
ACCO	UC7951	SX	116	136	25.1	23.9
MIGRO	SPX77	SX	138	157	25.3	24.3

OTHER REPORTS

Separate reports for variety performance are available for each district shown in fig. 1. These publications are available at your county extension office or from Publications Distribution, Printing and Publications Building, Iowa State University, Ames, Iowa 50011.

The 1979 Iowa Corn Yield Test Report:

Pm-660-1-79 District 1	Pm-660-5-79 District 5
Pm-660-2-79 District 2	Pm-660-6-79 District 6
Pm-660-3-79 District 3	Pm-660-7-79 District 7
Pm-660-4-79 District 4	

and justice for all

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*Widely grown entries made by Iowa State University.